REMARKS

Claims 1-8, 10-14, 16-18, 20, 22, 30-39, 41-45, 48, 50-58, and 63-65 will be pending upon entry of the present amendment. Claims 1, 13, 16, 30-32, 41, 42, 44, 48, 50-52, and 54 are amended, claims 23-29, 46, 47, 49, and 59-62 are cancelled, and new claims 63-65 are submitted herewith. No new matter has been added to the application.

A. Summary of Rejections Under 35 U.S.C. § 103

Claims 1, 2, 8, 12-14, 16-18, 20, 22-34, 36-39, 41, and 54-62 are rejected under 35 U.S.C. §103(a) as being unpatentable over Barlett (U.S. Pat. 6,573,883) in view of one or more of Lee et al. ("Two-Dimensional Position Detection System with MEMS Accelerometer for MOUSE Applications"), Svancarek (U.S. Pat. 6,249,274), Kuga (U.S. Pat. 5,701,131), and Odamura (U.S. Pat. 6,765,553).

Where passages of the patent references are cited in applicants' comments, they will be pinpointed by column number and line number(s) separated by a colon. Thus, for example, 3:22 refers to column 3, line 22.

B. Response to Rejections

Claim 1 as currently presented recites, in part, "a microcontroller … configured to generate pointer control signals correlated to … positions [of a movable body], only while detected movements of said body are less than a speed threshold and greater than an amplitude threshold." Bartlett in view of Lee fails to teach or suggest this limitation.

The Office Action states that "Bartlett teaches the first threshold is a speed [of] movement threshold" (page 7, line 4). Applicant strongly disagrees. The Office Action cites Bartlett in rejecting claim 1, citing 5:35-47, where Bartlett discusses its scrolling position commands, and lays out ranges of magnitude of rotation that produce particular position commands. This section says nothing about the speed of movement. Previously in the same column, Bartlet states, beginning at 5:22, "In response to a series of position commands, the list scrolls vertically. Preferably, as indicated, the scrolling position commands would be a function of *angular orientation* relative to the pitch rotation axis" (emphasis added). Bartlett is entirely silent with respect to a speed of movement threshold. This is because, in position commands such as those discussed, Bartlett is not concerned with how fast the device is tilted, but only with how far. When rotated beyond a first angle θ_1, it scrolls in a stepwise fashion, and when rotated to beyond a higher angle θ_2, it scrolls continuously (5:42-47). Each of its thresholds are determined on the basis of an angular position only, and are entirely insensitive to speed of movement or speed of rotation. Bartlett does not teach or suggest a speed threshold as recited in claim 1, nor does any of the art of record. Lee is relied upon only to show a MEMS device, and cannot provide of a speed of movement threshold that Bartlett lacks. Claim 1 is therefore allowable over the art of record.

Claim 16 recites, in part, "deriving a rate of change of position and an amplitude of change of position from the detected movements of said device; comparing the rate of change with a speed threshold; sending function activation signals to an electrical appliance corresponding to an axis of movement of the device when the derived rate of change exceeds the speed threshold; comparing the amplitude of movement with an amplitude threshold; and sending pointer control signals to the electrical appliance corresponding to the axis and amplitude of movement of the device when the amplitude of movement exceed the amplitude threshold but the rate of change does not the exceed the speed threshold."

None of the art of record, either individually or in combination, teaches or suggests the limitations of claim 16. While the Office Action points to Bartlett's scrolling position commands as corresponding to pointer control commands, Bartlett's scrolling position commands are detected on the basis of the angular orientation of its device, rather than a difference value (see 5:22, *et seq.*), as recited in the claim. Bartlett uses the symbol θ (Greek Theta) to refer to the orientation angle of its device at any given moment. Bartlett teaches establishment of a neutral θ position (see 3:63-4:5), and thereafter determines all other actions on the basis of that reference angle. The passage at column 5 where Bartlett discusses the scrolling position commands (5:22-47), describes comparing θ, i.e., the angle at which its device is currently positioned, with a number of ranges defined by angles θ_1, θ_2, and θ_3, each of which is defined with respect to the previously established neutral angle. Each change of position that

Bartlett's device makes is measured, not with respect to some previous position, but with respect to the original neutral angle.

Thus, for example, if Bartlett's lower limit θ_1 were equal to 3°, then a movement of Bartlett's device from an angular orientation of -2° to 2° would be ignored, even though the total change of angle would be 4°, inasmuch as both the previous position and the new position are less than 3° from its neutral position θ. On the other hand, if, in a device according to the invention of claim 16, the amplitude threshold were set at 3°, and the device was moved 4°, whether from a nominal -2° to 2°, or from 20° to 24°, both conditions would be interpreted as a difference value of 4°, which is greater than the amplitude threshold, so the device would send a corresponding pointer control signal. Additionally, as noted with reference to claim 1, Bartlett does not teach or suggest a speed threshold with respect to its position commands, and neither Lee nor any other art of record can provide the teachings that Bartlett lacks. Accordingly, claim 16 is allowable over the cited references.

Claim 30 has been amended to incorporate the limitation of dependent claim 62, and recites, in part, "producing control signals corresponding to the movement signals, and suitable for moving a pointer on a computer screen, provided the movement of the body does not exceed a speed threshold." The Office Action points to Bartlett's scrolling position commands as corresponding to the commands for moving a pointer, but, as previously discussed in detail, Bartlett's thresholds are with respect to angular orientation, and are not related to speed of movement. Lee is entirely silent with regard to such thresholds. Accordingly, claim 30 is allowable over Bartlett and Lee, individually or in combination.

Claim 36 recites, in part, "a microprocessor coupled to the MEMS sensor, configured to compare a rate of movement of the pointing device to a threshold and, if the rate of movement of the pointing device does not exceed the threshold, convert the position signals of the MEMS sensor to control signals suitable for controlling position of a pointer on the computer screen." Bartlett and Lee fail to anticipate this limitation of claim 36. In particular, Bartlett is silent with regard to converting a position signal "if the rate of movement of the pointing device does not exceed the threshold," as recited in claim 26. Clearly, claim 36 is allowable over the art of record.

Claim 42 has been amended to incorporate the limitation of claim 46, and recites, in part, "a circuit configured to produce a cursor movement command in a first direction, corresponding to a value of the first signal, when the first signal indicates rotation of the body that is lower than a speed threshold, and to produce a first function command when the first signal indicates rotation of the body that exceeds the speed threshold." Neither Bartlett nor any of the other art of record anticipates this limitation of claim 42, which is therefore allowable.

Claim 63 recites, in part, "a circuit configured to derive a current position of the body from the output signals, compare the current position with a previously derived position, and produce a pointer control signal on the basis of a difference between the previously derived position and the current position." None of the art of record teaches or suggests this limitation of claim 63, which is therefore allowable.

Overall, the cited references do not singly, or in any motivated combination, teach or suggest the claimed features of the embodiments recited in independent claims 1, 16, 39, 42, or 65, and thus such claims are allowable. Applicants' decision not to argue the allowability of each of the dependent claims is not to be construed as an admission that such claims would not be allowable but for their dependence on allowable base claims, and Applicants reserve the right to present such arguments as may become necessary in the future. If the undersigned representative has overlooked a relevant teaching in any of the references, the Examiner is requested to point out specifically where such teaching may be found.

In light of the above amendments and remarks, Applicants respectfully submit that all pending claims are allowable, and therefore request that the Examiner reconsider this application and timely allow all pending claims. Examiner Liang is encouraged to contact Mr. Bennett by telephone at (206) 694-4848 to discuss the above and any other distinctions between the claims and the applied references, and to address any informalities that may remain unresolved.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC

/Harold H. Bennett II/

Harold H. Bennett II
Registration No. 52,404

HHB:lcs

701 Fifth Avenue, Suite 5400
Seattle, Washington 98104
Phone: (206) 622-4900
Fax: (206) 682-6031

968579_1.DOC